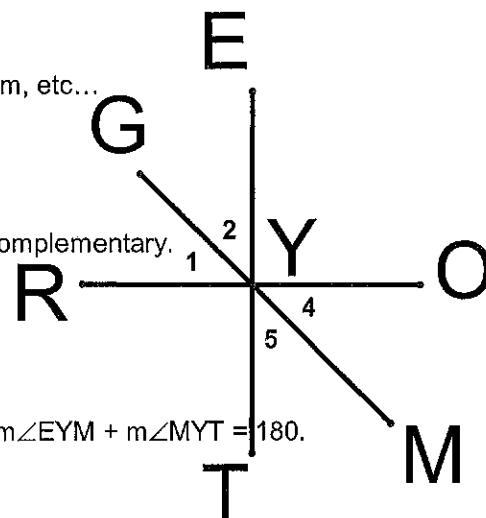


Name Key Date \_\_\_\_\_  
202 Chapter 2.6-2.8 Justify

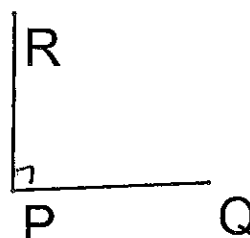
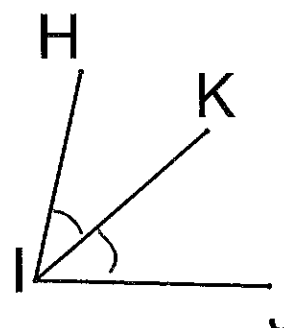
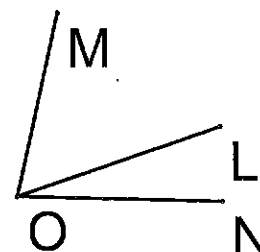
Justify the following statements with a definition, postulate, property, theorem, etc...

1. Def of  $\angle$  bis  $\overline{YM}$  bisects  $\angle TYO$ , then  $m\angle 4 = m\angle 5$ .
2. SAP  $RY + YO = RO$
3. Compl. thm If  $\angle RYE$  is a right angle, then  $\angle 1$  and  $\angle 2$  are complementary.
4. def of  $\perp$  lines If  $\overline{RO} \perp \overline{ET}$ , then  $\angle EYO$  is a right angle.
5. def of midpt If  $Y$  is the midpoint of  $\overline{GM}$ , then  $GY = YM$ .
6. def of suppl If  $\angle EYM$  and  $\angle MYT$  are supplementary, then  $m\angle EYM + m\angle MYT = 180$ .
7. AAP  $m\angle RYE + m\angle EYO = m\angle RYO$
8. def of rt  $\angle$  If  $\angle RYE$  is a right angle,  $m\angle RYE = 90$ .
9. suppl. thm Look at the picture,  $\angle GYE$  and  $\angle GYT$  are supplementary.
10. def of compl If  $m\angle 1 + m\angle 2 = 90$ , then  $\angle 1$  and  $\angle 2$  are complementary.
11. Vert  $\angle$   $\cong$   $\angle 2 \cong \angle 5$



Draw conclusions based on the given information. Then justify your conclusions with a definition, postulate, property, theorem, etc...

12. Given: picture (L lies in the interior of  $\angle MON$ )  
Conclusion:  $m\angle MOL + m\angle LON = m\angle MON$   
Reason: Angle addition postulate
13. Given:  $\angle 2$  and  $\angle 3$  are complementary;  $\angle 5$  and  $\angle 3$  are complementary  
Conclusion:  $\angle 2 \cong \angle 5$   
Reason: Complements of congruent angles are congruent
14. Given:  $\overline{IK}$  bisects  $\angle HIJ$   
Conclusion:  $\angle HIK \cong \angle KIJ$   
Reason: def of  $\angle$  bisector
15. Given:  $\overline{RP} \perp \overline{PQ}$   
Conclusion:  $\angle RPQ$  is rt.  $\angle$   
Reason: Definition of perpendicular lines
16. Given:  $\angle 1$  and  $\angle 3$  are supplementary;  $\angle 2$  and  $\angle 3$  are supplementary  
Conclusion:  $\angle 1 \cong \angle 2$   
Reason: Supplements of congruent angles are congruent

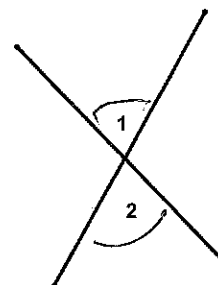


17. Given:  $\angle B$  is a right angle  
 Conclusion:  $m\angle B = 90$   
 Reason: Definition of a right angle

18. Given: M is the midpoint of  $\overline{AB}$ .  
 Conclusion:  $AM = MB$   
 Reason: def of midpt

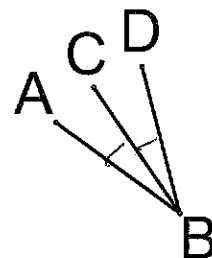


19. Given: PICTURE  
 Conclusion:  $\angle 1 \cong \angle 2$   
 Reason: Vertical angles are congruent



20. Given:  $\angle 1$  and  $\angle 2$  are complementary;  $\angle 4$  and  $\angle 3$  are complementary;  $\angle 1 \cong \angle 4$   
 Conclusion:  $\angle 2 \cong \angle 3$   
 Reason: Complements of congruent angles are congruent

21. Given:  $\overline{BC}$  bisects  $\angle ABD$   
 Conclusion:  $\angle ABC \cong \angle CBD$   
 Reason: def of bis

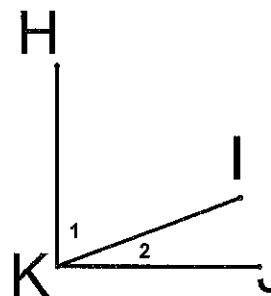


22. Given: picture  
 Conclusion:  $EF + FG = EG$   
 Reason: Segment addition postulate



23. Given:  $\angle 1$  and  $\angle 2$  are supplementary;  $\angle 7$  and  $\angle 8$  are supplementary;  $\angle 1 \cong \angle 7$   
 Conclusion:  $\angle 2 \cong \angle 8$   
 Reason: Supplements of congruent angles are congruent

24. Given:  $\angle HKJ$  is a right angle  
 Conclusion:  $\angle 1 + \angle 2$  are compl.  
 Reason: The complement theorem



25. Given: picture  
 Conclusion:  $\angle 1 + \angle 2$  are suppl.  
 Reason: The supplement theorem

